

A Guided Tour through NCSC's Online Curriculum and Instructional Resources for Teaching Students Who Take the Alternate Assessment

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NCSC Background


- NCSC received federal grant in 2010 and began developing a new alternate assessment in math and ELA to be completed by the 2014-15 school year*
- 24 states (including DC) and five national centers are in NCSC: <http://www.ncscpartners.org/>
- NCSC also developed curriculum/instructional resources for teaching students with significant cognitive disabilities that can be used in any state: <https://wiki.ncscpartners.org>

*states may have different implementation timelines for NCSC assessment

Key Information for this PowerPoint

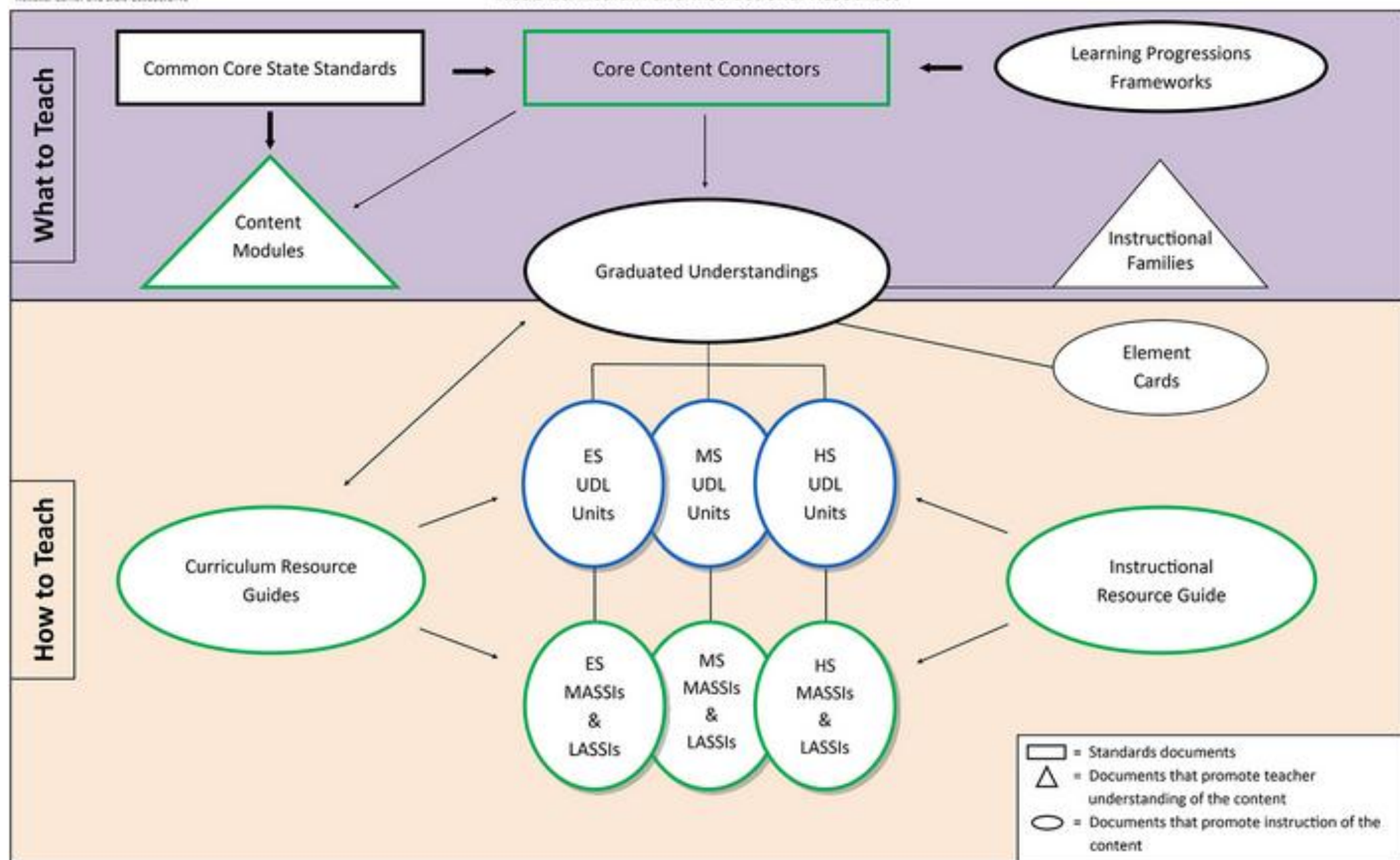
- Purpose: to demonstrate how to find information in each resource on a particular topic in the wiki using the example of 4th grade fractions
- The curriculum and instructional resources on the wiki are also provided for other math topics, as well as for many English language arts topics
- References to college and career readiness focus on: communicative competence, fluency in reading, writing and math, age appropriate social skills, independent work behaviors, and skills in accessing support systems
- For information on UDL, which is an important component of the wiki resources, see www.udlcenter.org

How to Locate Resources on the NCSC Wiki

- Click on the Parent Tips and Tools link on the main page of the wiki for a one-page navigation tool and a more detailed navigation guide
- Click on the name of the resource you want to explore on the interactive NCSC Schema, which can be found on the main page of the wiki
- Also, find resources by name on the All Resources toolbar via a link in the navigation toolbar on the left side of every wiki page
- Click on the wiki logo  to return to the main page from any wiki page

SCHEMA for Common Core State Standards Resources

NCSC Curriculum and Instructional Resources



Curriculum Resources

- Reference materials created to reinforce educators' understanding of curriculum content (found in the top half of the NCSC Schema with the label “What to Teach”)
- Include links to Common Core State Standards, links to information on the Learning Progression Frameworks, and the following NCSC resources: Core Content Connectors, Content Modules, and Instructional Families

Learning Progressions Framework (LPF)

- Shows the steps students typically take to make progress in a content area (e.g. math) to get a deeper, broader, more sophisticated understanding
- Represents the essential core concepts and processes learned in a content area (sometimes called the “big ideas”)

Core Content Connectors (CCCs)

- Operate as a starting point for instruction based on the Common Core State Standards
- Through the LPF, NCSC identified the key knowledge and skills (the “big ideas”) from the Common Core State Standards that are needed at each grade to make progress in later grades
- The “big ideas” were broken down into more teachable and assessable segments of content called CCCs.

Mathematics Topics for CCCs

CCCs in Mathematics:

Data Analysis, Probability, and Statistics 1

Data Analysis, Probability, and Statistics 2

Geometry

Measurement 1

Measurement 2

Numbers and Operations 1

Numbers and Operations 2

Numbers and Operations 3

Patterns, Relations, and Functions 1

Patterns, Relations, and Functions 2

Symbolic Expression 1



Grade 4 Fractions Example in CCC Resource for Numbers and Operations

Progress Indicator: E.NO.1I identifying and locating fractions on the number line or as regions, or parts of a set or unit, and recognizing that whole numbers are a subset of rational numbers

Core Content Connectors: 4	CCSS Domain/Cluster	Common Core State Standard
4.NO.1I6 Locate fractions on a number line	Number and Operations - Fractions 3 NF Develop understanding of fractions as numbers.	3.NF.A.2 Understand a fraction as a number on the number line; represent fractions on a number line diagram. a) Represent a fraction $\frac{1}{b}$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $\frac{1}{b}$ and that the endpoint of the part based at 0 locates the number $\frac{1}{b}$ on the number line. b) Represent a fraction $\frac{a}{b}$ on a number line diagram by marking off a lengths $\frac{1}{b}$ from 0. Recognize that the resulting interval has size $\frac{a}{b}$ and that its endpoint locates the number $\frac{a}{b}$ on the number line.

Content Modules

- Provide explanations and examples of the concepts contained in the CCSS that may be difficult to teach or unfamiliar to special education teachers
- Can be used at the elementary, middle, and high school levels
- Promote an understanding of the concepts to support instructional planning
- Provide teachers with potential adaptations and modifications to consider when designing materials and instruction (UDL)

Topics for Content Modules

Mathematics

Coordinate Plane Content Module

Expressions Content Module

Fractions and Decimals Content Module

Functions Content Module

Linear Equations Content Module

Perimeter, Area and Volume Content Module

Radicals and Exponents Content Module

Ratios and Proportions Content Module

Table of Contents for Fractions and Decimals Content Module

Contents [hide]

- 1 Plot the Course
 - 1.1 The rationale
 - 1.2 Module Goal
 - 1.3 Module Objectives
- 2 Time for Take Off
 - 2.1 Vocabulary
 - 2.2 Ideas to support vocabulary learning
- 3 Floating on Air
 - 3.1 Elementary School
 - 3.2 Middle School
- 4 Sharing the Sky
- 5 Prepare for Landing
 - 5.1 Additional Resources
 - 5.2 Supplemental Materials
 - 5.3 Module Assessments
 - 5.4 Sample General Education Lesson Plans

Floating on Air:

Provide CCCs for each grade covered by the Module

Sharing the Sky:

Provide information for teaching a wide range of students with a variety of learning needs

Sharing the Sky Section of Fractions/Decimals

Module: Representation Portion of UDL Table

Some examples of options for teaching Fractions and Decimals to students who may present instructional challenges due to:				
	Visual Impairment or Deaf/Blind	Physical Impairment: Little/No Hand Use	Lacks Basic Numeracy Concepts	Motivational/Attention Issues
Representation	Use a talking calculator when solving equations; use a ruler with raised measurement lines, use objects to represent fractions and decimals; use raised lines to represent portions of the whole object. Use items that are velcroed together to represent the whole and have the student separate the whole into parts.	Count the parts of fractions or decimals using a step by step process which progresses through numbers; student scans an array of possible options and uses a switch to select the number to identify the numerator; use computer representation of figures that can be manipulated with switch; place fraction representations on a slant board or eye gaze board; create a grid on a large surface on the floor that the student can walk over or ride over in wheelchair.	Use fraction and decimal manipulatives that can be separated and placed on a number line. Have student use talking calculator to count along. Students can use one to one correspondence to match equal number of parts on representation of fraction or decimals. Color code equations and corresponding parts of calculator to support students correctly entering equations.	Find fractions of motivating objects (e.g., pizza, coloring markers in a box, piece of a Lego set). Incorporate technology including computer representations, videos, animations, and talking calculators. Use token economy system that embeds fractions ("you earned $\frac{1}{4}$ of your Lego piece, you have $\frac{3}{4}$ left and then you get Lego time.")

UDL Table also includes strategies for Expression and Engagement (not shown)



Instructional Families

- Group related CCCs into families showing how they develop and interact across all the grades, across a grade band (e.g. grades 6-8), and within a grade
- Help educators see what is coming next so they can prepare students for future learning
- Can be used to inform standards-based IEP goal-writing

Topics for Mathematics Instructional Families (Fractions are included under Number Operations)

Instructional Families in Mathematics

Instructional Families: Data Analysis, Probability, and Statistics

Instructional Families: Geometry

Instructional Families: Measurement

Instructional Families: Number Operations

Instructional Families: Patterns

Table of Contents for Number Operations: Views of Instructional Families Related to 4th grade Fractions

Contents [hide]

1 Additional References

2 Labeling Reference Key

3 View of Learning Progressions Frameworks (LPF) Targets and Instructional Families across Grades

3.1 Distribution of Instructional Families: LPF Strand- Number Operations (Real Numbers)

3.2 Distribution of Instructional Families: LPF Strand- Number Operations (Real Numbers)

3.3 Distribution of Instructional Families: LPF Strand- Number Operations (Real Numbers)

4 View of Grade Band Core Content Connectors (CCCs) by Learning Progressions Frameworks Targets and Instructional Families

4.1 Overview of CCCs: Number Operations (Real Numbers) - Counting and Representing Numbers; Understanding Base Ten Number System; Determining R

4.2 Overview of CCCs : Number Operations (Real Numbers)- Counting and Representing Numbers; Understanding Base Ten Number System; Determining R

4.3 Overview of CCCs: Number Operations (Real Numbers)- Counting and Representing Numbers; Understanding Base Ten Number System; Determining R

4.4 Overview of CCCs: Number Operations (Real Numbers)- Counting and Representing Numbers; Understanding Base Ten Number System; Determining R

4.5 Overview of CCCs: Number Operations (Real Numbers)- Counting and Representing Numbers; Understanding Base Ten Number System; Determining R

4.6 Overview of CCCs: Number Operations (Real Numbers)- Counting and Representing Numbers; Understanding Base Ten Number System; Determining R

4.7 Overview of CCCs: Number Operations (Fractions/Ratios/Proportions)-Representation; Determine Equivalency; Perform Operations and; Problem Solving

4.8 Overview of CCCs: Number Operations (Fractions/Ratios/Proportions)-Representation; Determine Equivalency; Perform Operations and; Problem Solving

5 View By Instructional Families and CCSS Domains

5.1 Instructional Family: Number Operations (Real Numbers)

5.2 Instructional Family: Number Operations (Real Numbers)

5.3 Instructional Family CCCs: Number Operations (Real Numbers)

5.4 Instructional Family CCCs: Number Operations (Real Numbers)

5.5 Instructional Family: Number Operations (Real Numbers)

5.6 Instructional Families: Number Operations (Fractions/Ratios/Proportions)



4.7 in Table of Contents: Overview of CCCs by Instructional Families

*This screenshot only shows part of the chart.

CCSS Domain Names: Number Operations – Fractions and Ratios and Proportional Relationships	CCSS Domain Names: Number Operations – Fractions and Ratios, Number Operations in Base Ten, The Number System and Proportional Relationships	CCSS Domain Names: Number Operations – Fractions and Ratios, The Number System and Proportional Relationships	CCSS Domain Names: Number Operations – Fractions and Ratios, The Number System and Proportional Relationships
Representing	Determining Equivalency	Performing Operations	Problem Solving
3.NO.1I1 Identify the number of highlighted parts (numerator) of a given representation (rectangles and circles) 3.NF.1	4.NO.1I6 Locate fractions on a number line 3.NF.2	4.NO.2h1 Add and subtract fractions with like denominators of (2,3,4, or 8) 4.NF.3 a, b	4.NO.2h3 Solve word problems involving addition and subtraction of fractions with like denominators (2, 3, 4, or 8) 3.NF.3d
3.NO.1I2 Identify the total number of parts (denominator) of a given representation (rectangles and circles) 3.NF.1	4.NO.1I7 Order fractions on a number line 3.NF.2	4.NO.2h2 Add and subtract fractions with like denominators (2,3,4, or 8) using representations 4.NF.3 a, b	5.NO.2c2 Solve word problems involving the addition, subtraction, multiplication or division of fractions 5.NF.2
3.NO.1I3 Identify the fraction that matches the representation (rectangles and circles; halves, fourths, and thirds, eighths) 3.NF.1	4.NO.1m1 Determine equivalent fractions 3. NF.3	5.NO.2b1 Add and subtract fractions with unlike denominators by replacing fractions with equivalent fractions (identical denominators) 5.NF.1	6.NO.2c4 Solve word problems involving the addition, subtraction, multiplication or division of fractions 5.NF.7c

First number of code is the grade number (e.g. 4.NO.2h1 is a 4th grade CCC reference and 4.NF.3 a, b is a 4th grade Common Core State Standard reference). 4th grade CCCs for “Representing” can’t be seen in this partial chart, you have to scroll further down the page.



Instructional Resources

- Reference materials created to support classroom teaching for students with significant cognitive disabilities (found in the bottom half of the NCSC Schema labeled “How to Teach”)
- Include: Element Cards, Curriculum Resource Guides, UDL Instructional Units, Mathematics/Language Arts Activities for Scripted Systematic Instruction, and an Instructional Resource Guide

Element Cards

Each Element Card:

- Focuses on one or more CCC(s) from a specific instructional family;
- Provides “essential understandings” that include measurable and observable content that is challenging, yet attainable; and
- Provides a wide range of suggested instructional strategies and supports to promote instruction for students with diverse learning needs, including those without prior knowledge.

Element Cards are already written for many CCCs, but are meant to serve as models for teachers to make their own, as needed. In time, teachers will be able to share their materials on the wiki.



Topics for Mathematics Element Cards

Mathematics Element Cards

- Data Probability and Statistics
- Geometry
- Patterns, Relations, and Functions
- Measurement
- Real Number Operations
- Number Operations Fractions
- Symbolic Expression

Information Found on Element Cards Landing Page for “Number Operations Fractions”

In addition to Element Cards related to Fractions, you will see:


Websites

http://www.teachingideas.co.uk/maths/contents_fractions.htm 

<http://www.mathsisfun.com/converting-decimals-fractions.html> 

<http://www.mathplayground.com/> 

<https://www.khanacademy.org/> 

<http://www.mathhelp.com/> 

Other Resources

<http://www.jstor.org/stable/10.5951/teacchilmath.19.1.0050?origin=JSTOR-pdf> 

<http://www.ncpublicschools.org/acre/standards/common-core-tools/> 



CCC:	4.NO.2h2	Add and subtract fractions with like denominators (2, 3, 4, or 8) using representations.
Strand: Number Operations (Fractions, Ratios, Proportions).	Family: Performing Operations	
Progress Indicator: E.NO.2h Adding, subtracting, and multiplying fractions, including mixed numbers		
Essential Understandings	Concrete Understandings: <ul style="list-style-type: none">Differentiate between parts of a fraction and the whole.Count the parts represented by the numerator.Recognize like denominators (e.g., recognize that the '4' in 2/4 is the same as the '4' in 1/4).Create a pictorial or concrete representation (using fraction strips or tiles) of fractions.Determine whether to use addition and subtraction strategies based on the context of the problem.	Representation: <ul style="list-style-type: none">Understand the components of a fraction (numerator and denominator).Find the sum of two numbers.Know the following vocabulary: numerator, denominator.
Suggested Instructional Strategies: <ul style="list-style-type: none">Model-Lead-Test using representations*Teach explicit rules for adding and subtracting fractions.Pizza Fractions: Cut 'pizza' circles the same size then cut them into a variety of fractions and use them to add/subtract mixed numbered fractions (e.g., add one half pizza to two 1/4 pieces to make a whole or subtract 1/3 pizza from 6/6).		
Supports and Scaffolds: <ul style="list-style-type: none">Fraction stripsFraction tilesPictorial representations where the wholes are the same sizeCalculatorAssistive TechnologyInteractive whiteboardComputer softwarePattern blocks or sets of objectsRepresentations of fractions with raised sections		

Curriculum Resource (CR) Guides

Provide:

- Examples of how the content is taught in general education
- Ideas for real life use
- Ways to promote college and career readiness
- Examples for differentiating instruction for a wide range of student needs (UDL tables)
- Links to resources

Topics for Mathematics Curriculum Resource Guides

Mathematics

Data Analysis

Equations

Measurement and Geometry

Fractions and Decimals

Ratio and Proportions

Table of Contents for Fractions and Decimals Curriculum Resource Guide

Contents [hide]

1 Curriculum Resource Guide - **Mathematics Content: Fractions and Decimals**

1.1 Questions about:

1.2 What are "fractions" and how are they taught in general education settings?

2 The essential knowledge in this content area

3 Common misunderstandings in this content area

4 Prior Knowledge/skills needed (can be taught concurrently)

5 What are "decimals" and how are they taught in general education settings?

5.1 The essential knowledge in this content area

6 What are some of the types of activities general educators will use to teach this skill?

6.1 Activities from General Education Resources

6.1.1 Fractions

6.1.2 Links Across Content Areas

7 What Connectors to the Common Core Standards Are Addressed in Teaching "Fractions and Decimals"?

8 What are Some Additional Activities That Can Promote Use of this Academic Concept in Real World Contexts?

9 How Can I Further Promote College and Career Readiness when Teaching "Fractions and Decimals"?

9.1 Ideas for Promoting Career/ College Ready Outcomes

10 How Do I Make Instruction on "Fractions and Decimals" Accessible to ALL the Students I Teach?

10.1 Teach Prerequisites and Basic Numeracy Skills Concurrently: Remember that students can continue to learn

10.2 Incorporate UDL: Universal Design of Learning When Teaching Fractions and Decimals

10.3 CCR & Standards for Mathematical Practice Table



#8 in Table of Contents: What are Some Additional Activities That Can Promote Use of this Academic Concept in Real World Contexts?

Measuring out fractions of ingredients for cooking.

Using a ruler to measure out fractions of a foot and inch to cut wood to make a birdhouse.

Students can learn to sort items using the Dewey decimal system in the library.¹⁰

Working as a cashier and counting money to make change.

Calculating batting averages for sports team.

Balancing a checkbook

Measuring out medications

Calculating a cost of an item in sales promotion (1/2 off sale)

Measuring someone's height in a doctor's office.

Cutting hair (customer wants 2 and ½ inches cut)

Universal Design for Learning (UDL) Units and Lessons

for more info on UDL see www.udlcenter.org

- Purpose: to model how to plan for ALL students using the principles of UDL (multiple means of engagement, representation, and expression)
- Provide additional considerations for Emerging Readers and Emerging Communicators
- For use in general education and special education classes
 - great for co-teaching and collaborative planning

Mathematics UDL Instructional Units

The Mathematics UDL Instructional Units cover the topic of measurement with a unit for Elementary, Middle, and High School. They provide models for creating UDL units for other topics, such as fractions.

Mathematics

- [Elementary Mathematics UDL Instructional Unit](#)
- [Middle School Mathematics UDL Instructional Unit](#)
- [High School Mathematics UDL Instructional Unit](#)

Elementary Mathematics UDL Instructional Unit

Contents Page

If you click on the link to this unit, you will see the contents below as well as a section of links to all the printable resources related to the unit.

UDL Elementary Measurement Unit

Cole, A., Land, L., Burdge, M., & Clayton, J. (2013) UDL Elementary Measurement Unit. Lexington: University of Kentucky.

Before beginning with a lesson review the resources and standards that are related to the material you will be teaching.

[Elementary Measurement Unit Standards Overview](#)

[Elementary Measurement Unit Key Vocabulary](#)

To see sample lesson plans, follow the links below:

[Elementary Measurement - Lesson 1](#)

[Elementary Measurement - Lesson 2](#)

[Elementary Measurement - Lesson 3](#)

[Elementary Measurement - Lesson 4](#)

[Elementary Measurement - Lesson 5 - Culminating Activity](#)



ES Mathematics UDL Instructional Unit-Lesson 1

Table of Contents for Elementary Measurement-Lesson 1:

Contents [\[hide\]](#)

1 Objectives

2 Essential Questions

3 Vocabulary

4 Materials

5 Introduction

5.1 Activate Previous Knowledge

5.2 Additional Considerations for Emerging Readers and Emerging Communicators

5.3 Establish Goals/Objectives for the Lesson

5.4 Additional Considerations for Emerging Readers and Emerging Communicators

6 Body

6.1 Additional Considerations for Emerging Readers and Emerging Communicators

7 Practice

7.1 Additional Considerations for Emerging Readers and Emerging Communicators

8 Closure

8.1 Additional Considerations for Emerging Readers and Emerging Communicators:

8.2 Exit Assessment

8.3 Additional Considerations for Emerging Readers and Emerging Communicators:



Practice: Additional Considerations for Emerging Readers and Emerging Communicators

There are lengthy sections of additional considerations throughout every UDL lesson. For example, as part of the considerations for practicing measurement in UDL Lesson 1 for Elementary School Mathematics, there are suggestions for adapting the measuring tool:








- a ruler with tactile qualities or a piece of paper;
- digital rulers;
- bendable/foldable rulers;
- tactile rulers;
- transparent/translucent rulers;
- simplified rulers with only inches marked; and
- rulers adapted with hook-and-loop tape or a "handle".

Math/Language Activities for Scripted Systematic Instruction (MASSIs and LASSIs)

- Provide intensive systematic instruction in math (MASSIs) or English language arts (LASSIs), when appropriate, on key concepts and symbols for use in any instructional setting
- Are generally designed for use with UDL lessons
- Incorporate evidence-based instructional practices
- Provide teaching scripts to help teachers with systematic instruction
- Are designed with graduating levels of difficulty (starting with steps for teaching students with little or no knowledge of the content)

Topics for MASSIs

The main MASSI page contains a link to MASSI presentations, the Instructor Cue Key (icons that appear in the MASSIs and LASSIs), plus links to MASSIs for the topics listed in #3-6 of the Table of Contents.

Cue	Definition
	System of Least Prompts
	Constant Time Delay
	Example/Non-Example Training
	Model, Lead, Test
	Stopping Point
	Standards for Mathematical Practice
	Career & College Readiness

Contents [\[hide\]](#)

- 1 MASSI Presentations
- 2 Instructor Cue Key
- 3 Equations
- 4 Measurement and Geometry
- 5 Data Analysis
- 6 Ratio and Proportions

MASSI on Ratios and Proportions

If you click on Ratios and Proportions on the MASSI landing page it will bring you to this set of links. To find a MASSI script and printable materials most closely related to 4th grade fractions, click on Elementary.

Ratio and Proportions

[Elementary](#)

[Middle](#)

[High](#)

Elementary MASSI for Ratio and Proportions

The activity is “Going on a Field Trip” for grades 3-5. A chart identifies the related CCSS, the CCCs and the MASSI objectives. Here is the part of the chart for grades 3 and 4. The grade 3 activity can be used to review concepts for students in grade 4.

Common Core State Standard	Core Content Connectors	MASSI OBJECTIVES
3.OA.D.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	3rd 3.NO.2e1 Solve and check one or two-step word problems requiring addition, subtraction, or multiplication with answers up to 100.	Given a word problem with number of groups and total number of students calculate number of students in each group.
3.OA.A.1 Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. <i>For example, describe a context in which a total number of objects can be expressed as 5×7.</i>	4th 4.PRF.1d2 Use objects to model multiplication and division situations involving up to 10 groups with up to 5 objects in each group and interpret the results.	Given number of activity buses and number of groups of students in each bus, decide how many students in all are going on the field trip.

Components of the scripted MASSI lesson

Each part of the scripted lesson directs the teacher in how to do the following and suggests good stopping points:

- Build essential understanding of concepts and symbols
- Introduce the activity
- Introduce the problem
- Model the process
- Provide student practice
- Check and score

Portion of the MASSI scripted lesson



STUDENT PRACTICE: Now it's your turn. **Display the counters, bus, and "count by" graphic organizers.** Your problem says, Mr. Burton's class left to go to the strawberry farm. 3 groups of 10 students got on the bus. How many students in all were on the bus? **Use LEAST INTRUSIVE PROMPTS script as needed to help students with each step.**

****Note:** If you teach this section several times in a row, change the amount of groups and number in each group to ensure the students are not memorizing but correctly displaying the skills needed to solve the problems.

CHECK AND SCORE

STEP	Teacher Says/Does	Student Response
23.	Wait three seconds. If student does not begin then prompt, "Find the groups of ten."	Selects groups of ten.
24.	Wait three seconds. If student does not begin then prompt, "Count out 3 groups."	Counts out three groups of ten.
25.	Wait three seconds. If student does not begin then prompt, "Count by 10 to find the answer."	Counts by tens to 30.
26.	How many students in all rode the bus?	Says or indicates 30.

Other Resources in the MASSIs

- A skills test
- Troubleshooting and data-based decision making for the skills test
- A culminating activity, e.g. plan and go on the field trip from the activity
- Ideas for building toward grade-level competence
- Printable materials

Ideas to Build Toward Grade-Level Competency in Elementary MASSI for Ratio and Proportions

Component	Activity	What Student Does	'Generalization/ Fluency'
Check word problems	Identify opposite operations (opposite of multiply is divide, etc.) to check work completed in this lesson.	Uses opposite operation to check work. Students will need be able to identify which numbers to enter into opposite equation.	Complete problems not related to field trips. Use manipulatives to show how to check work. Complete word problems related to other themes and real world applications.
Use four digit dividends and two digit divisors	Solve word problems related to whole grade levels or whole school attending a field trip.	Similar to word problems completed in lessons but must use manipulatives in larger sets, count by larger sets (e.g., 100s), use calculator to enter four digit dividends and two digit divisors.	Complete word problems related to other themes and real world applications.

Instructional Resource (IR) Guide

- Serves as a source of information about evidence-based best practice in instruction for students with significant cognitive disabilities
- Reviews instructional strategies, including prompting, systematic instruction, and use of feedback and data
- Further explains the use of these practices in the MASSIs and the LASSIs

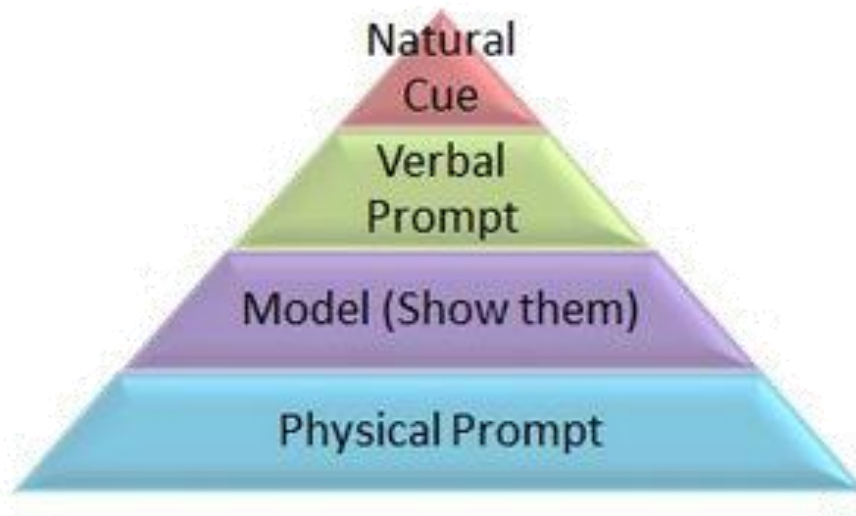
IR Guide Table of Contents

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- 1 Systematic Instruction
- 2 Time Delay
- 3 Additional Prompting Strategies
- 4 Additional Resources
- 5 Finding a Response Mode
- 6 Point to the correct response when given an array
- 7 Pull-off
- 8 Eye gaze
- 9 Say or Type
- 10 Show
- 11 Write or type on computer
- 12 Use material from the lesson
- 13 Constant Time Delay (CTD)
 - 13.1 Zero Delay Round
 - 13.2 Time Delay Round
 - 13.3 Sample Script for CTD (Teaching Expressive Symbol Identification)
 - 13.4 Sample Script for CTD (Teaching Receptive Word Identification)
- 14 Some Tips for Using Time Delay
- 15 System of Least Prompts (also known as Least Intrusive Prompting [LIP] or Least to Most Prompting)
- 16 Guidelines for Using System of Least Prompts
- 17 Examples of Prompting Hierarchies
- 18 Sample Script for System of Least Prompts (Calculator Use)
 - 18.1 Sample Script for System of Least Prompts (Text Based Literal Recall)
- 19 Model, Lead, Test
- 20 Sample Script for Model, Lead, Test (Measuring Length in Inches with Ruler)
- 21 Example/Non-Example Training
- 22 Sample Script for Example, Non-Example Training (Teaching Concept of <)
- 23 Generalization When Using Example, Non-Example Training
- 24 Sample Script for Example, Non-Example Training (Teaching Setting)
- 25 References



Examples of Prompting Hierarchies



Generalization When Using Example, Non-Example Training

In order to promote generalization, use different objects/pictures on different days (e.g., on day two use apples, day three use cars, day four use hats, day five use star stickers)

for that entire session). Use the same script as above, simply using the other objects.



Once the student masters greater than in the above format now introduce new formats. These include greater than with volume and greater than with numbers.



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6

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9

2

Professional and Parent Resources

- Click on the link called “Educator Professional Development and Parent Resources” on the Main Page of the NCSC wiki
- Register with name/email (this info will not be used to contact you)
- As part of the NCSC professional development focus, a series of presentations and learning modules has been developed for educators, parents, and other interested audiences.
- Badges are earned for completing modules, and can be used for continuing education credit at the discretion of state/local agencies.
- There is also a link to written materials for parents and others interested in summaries of the project.



Table of Contents and list of Professional Development and Parent Modules

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- 1 Professional Development and Parent Modules (University of Kentucky)
 - 1.1 COMING SOON!
- [2 Obtaining Badges for Module Completion](#)
- 3 NCSC Resources for Parents (and for others interested in summaries of our project)
- 4 MASSI and LASSI Presentations (University of North Carolina)

COMING SOON!

Making Math Accessible

Making English Language Arts Accessible

Communication

College and Career Readiness

Teacher and Principle Modules

Parent Modules

Instructional Technique

Using the Wiki

